

AMENDMENTS TO CLAIMS

Claim 1 (Canceled)

Claim 2 (New) An evaporative cooling unit to be positioned in ambient air and including

- (a) a housing having a top and a bottom, said housing circumscribing a central area;
 - (b) a fan mounted at the top of said housing to produce a flow of air into said housing;
 - (c) a transition zone beneath said housing;
 - (d) a support surface mounted in said central area and spaced apart from said housing;
 - (e) a plurality of canted vanes extending from said support surface to said housing to guide said flow of air along a helical path through said housing to said transition zone;
- said transition zone including a lip mounted on said bottom of said housing, said lip
- (i) having an inner arcuate surface shaped and dimensioned, and
 - (ii) having a length,
- such that said flow of air entering said transition zone after moving along said helical path expands outwardly radially over said arcuate surface along generally linear paths of travel while said inner arcuate surface protects said flow of air from an inflow of ambient air while said flow of air moves over said inner arcuate surface.

Claim 3 (New): The cooling unit of Claim 2 wherein said length of said arcuate surface is in the range of six to fourteen inches.

1 Claim 4 (New): The cooling unit of Claim 2 wherein air traveling through said transition
2 zone over said arcuate surface travels over points on said arcuate surface that lie along
3 a line.

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6 Claim 5 (New): The cooling unit of Claim 2 wherein

- 7 (a) said fan includes a plurality of blades and air traveling from said blades into said
8 houses moves downwardly at an average angle from the vertical in the range of
9 twenty degrees to forty-five degrees;
- 10 (b) said vanes are positioned at an angle from vertical in the range of forty to fifty
11 degrees and deflect air flowing downwardly from said fan such that said air travels
12 downwardly at an angle of forty-five to forty-eight degrees from vertical; and,
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- 14 (c) said angle from vertical of said vanes is within ten to twenty degrees of said average
15 angle of air flow off said blades of said fan.

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17 Claim 6 (New): The cooling unit of Claim 2

- 18 (a) wherein each of said blades includes an upper edge;
- 19 (b) including a protective grate positioned above said blades such that the distance of
20 said grate from each of said upper edges averages two and one half inches or
21 more.
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